



Missouri Department of Natural Resources

Water Protection And Soil Conservation Division Public Drinking Water Program

MODEL

Emergency Operating Plan For Public Water Supplies

Emergency Plan Information

- Public Water System Information

- Mutual Aid Agreements

- Suppliers

- Emergency Equipment Available

Guidelines for Preparing Tank Trucks for Transporting Potable Water

- Selection

- Cleaning Procedures

- Disinfection Procedures

- Filling Procedure

- Testing

EMERGENCY PLAN INFORMATION

PUBLIC WATER SYSTEM INFORMATION

PWS Name: _____ County: _____
PWS ID#: _____ Population _____ Source(s) of Water _____
Address: _____
Phone: Office _____ Plant _____ Fax _____

Key Personnel (i.e., Mayor, City Manager, President, Owner, etc.) - Mark with * if authorized to spend money.

Name _____	Position _____
Phone: Office _____	Home _____ Mobile _____
Fax _____	Pager _____ Radio _____
Name _____	Position _____
Phone: Office _____	Home _____ Mobile _____
Fax _____	Pager _____ Radio _____
Name _____	Position _____
Phone: Office _____	Home _____ Mobile _____
Fax _____	Pager _____ Radio _____

Operations Personnel: (Manager, Operator, Superintendent, etc.) - Mark with * if authorized to spend money.

Name _____	Position _____	Cert. Level _____
Phone: Office _____	Home _____	Mobile _____
Fax _____	Pager _____	Radio _____
Name _____	Position _____	Cert. Level _____
Phone: Office _____	Home _____	Mobile _____
Fax _____	Pager _____	Radio _____
Name _____	Position _____	Cert. Level _____
Phone: Office _____	Home _____	Mobile _____
Fax _____	Pager _____	Radio _____

Back-up/fill-in Operator when Primary Operator is not available:

Name _____	Position _____	Cert. Level _____
Phone: Office _____	Home _____	Mobile _____
Fax _____	Pager _____	Radio _____

OTHER RESOURCES

DNR Emergency Spill Line	Phone <u>573-634-2436</u>	Fax <u>573-526-5101</u>	Other _____
Chemtrec	Phone _____	Fax _____	Other _____
Regional DNR Office	Phone _____	Fax _____	Other _____
USEPA 1-800-821-5073	Phone <u>913-281-0991</u>	Fax <u>913-551-7949</u>	Other _____
Regional DOH Office	Phone _____	Fax _____	Other _____
Centers for Disease Control	Phone _____	Fax _____	Other _____
MO One Call	Phone _____	Fax _____	Other _____
FBI	Phone _____	Fax _____	Other _____
National Weather Service	Phone _____	Fax _____	Other _____
Other _____	Phone _____	Fax _____	Other _____
Other _____	Phone _____	Fax _____	Other _____
Other _____	Phone _____	Fax _____	Other _____

LOCAL RESOURCES

Police: Phone _____	Radio _____	Other _____	Fax _____
Fire: Phone _____	Radio _____	Other _____	Fax _____
Haz-Mat: Phone _____	Radio _____	Other _____	Fax _____
City or County Emergency Manager: _____			
Phone: Office _____	Home _____	Mobile/Pager _____	
TV Station _____	Person _____	Phone _____	Fax _____
TV Station _____	Person _____	Phone _____	Fax _____

Radio Station_____	Person_____	Phone_____	Fax_____
Radio Station_____	Person_____	Phone_____	Fax_____
Newspaper_____	Person_____	Phone_____	Fax_____
Newspaper_____	Person_____	Phone_____	Fax_____

MUTUAL AID AGREEMENTS

Other Water Company_____	Person_____
Phone_____ Fax_____	Other_____
Summary of Agreement _____	

Other Water Company_____	Person_____
Phone_____ Fax_____	Other_____
Summary of Agreement _____	

Other_____	Person_____
Phone_____ Fax_____	Other_____
Summary of Agreement _____	

SUPPLIERS (Place * if emergency contract is in place)

Equipment

Equipment Supplied_____		
Company_____	Person_____	Position_____
Phone_____	Fax_____	Other_____
Equipment Supplied_____		
Company_____	Person_____	Position_____
Phone_____	Fax_____	Other_____
Equipment Supplied_____		
Company_____	Person_____	Position_____
Phone_____	Fax_____	Other_____

Chemicals

Chemicals Supplied_____		
Company_____	Person_____	Position_____
Phone_____	Fax_____	Other_____
Chemicals Supplied_____		
Company_____	Person_____	Position_____
Phone_____	Fax_____	Other_____
Chemicals Supplied_____		
Company_____	Person_____	Position_____
Phone_____	Fax_____	Other_____

Construction

Expertise_____		
List Heavy Equipment Available_____		
Company_____	Person_____	Position_____
Phone_____	Fax_____	Other_____
Expertise_____		
List Heavy Equipment Available_____		
Company_____	Person_____	Position_____
Phone_____	Fax_____	Other_____
Expertise_____		
List Heavy Equipment Available_____		
Company_____	Person_____	Position_____
Phone_____	Fax_____	Other_____

SUPPLIERS (Continued) - (Place * if emergency contract is in place)

Utilities

Gas Company _____
 Phone _____ Fax _____ Other _____
 Electric Company _____
 Phone _____ Fax _____ Other _____
 Wastewater _____
 Phone _____ Fax _____ Other _____
 Telephone Company _____
 Phone _____ Fax _____ Other _____

Alternative Water Supplies (List bottled water suppliers, tank truck owners, etc.)

Provides _____
 Company _____ Person _____ Position _____
 Phone _____ Fax _____ Other _____
 Provides _____
 Company _____ Person _____ Position _____
 Phone _____ Fax _____ Other _____
 Provides _____
 Company _____ Person _____ Position _____
 Phone _____ Fax _____ Other _____

Engineering Services

Area of Expertise _____
 Company _____ Person _____ Position _____
 Phone _____ Fax _____ Other _____
 Area of Expertise _____
 Company _____ Person _____ Position _____
 Phone _____ Fax _____ Other _____

Laboratory Services

Service Provided _____
 Company _____ Person _____ Position _____
 Phone _____ Fax _____ Other _____
 Service Provided _____
 Company _____ Person _____ Position _____
 Phone _____ Fax _____ Other _____

Repair

Radio Repair
 Company _____ Person _____ Position _____
 Phone _____ Fax _____ Other _____
 Telemetry Repair
 Company _____ Person _____ Position _____
 Phone _____ Fax _____ Other _____
 Other _____
 Company _____ Person _____ Position _____
 Phone _____ Fax _____ Other _____

Well Supplies/Drillers

Service _____
 Company _____ Person _____ Position _____
 Phone _____ Fax _____ Other _____
 Service _____
 Company _____ Person _____ Position _____
 Phone _____ Fax _____ Other _____

EMERGENCY EQUIPMENT AVAILABLE

Transportation (List boats, trucks, etc.)

Type _____	Owner _____	Storage Location _____
Type _____	Owner _____	Storage Location _____
Type _____	Owner _____	Storage Location _____

Communications (List mobile phones, pagers, radios)

Type _____	Owner _____	Storage Location _____
Type _____	Owner _____	Storage Location _____
Type _____	Owner _____	Storage Location _____
Type _____	Owner _____	Storage Location _____

Pumps

Type _____	Size _____
Owner _____	Storage Location _____
Type _____	Size _____
Owner _____	Storage Location _____

Generators

Type _____	Owner _____	Storage Location _____
Type _____	Owner _____	Storage Location _____

Chlorine Response Kit

Type _____	Owner _____	Storage Location _____
Type _____	Owner _____	Storage Location _____

Other

Type _____	Owner _____	Storage Location _____
Type _____	Owner _____	Storage Location _____
Type _____	Owner _____	Storage Location _____
Type _____	Owner _____	Storage Location _____

GUIDELINES FOR PREPARING TANK TRUCKS FOR TRANSPORTING POTABLE WATER

The following procedures are guidelines for using tank trucks or trailers to provide potable water during drought or other emergency conditions. The appropriate Department of Natural Resources= regional office should be contacted before a water hauling operation is begun.

Selection

Tank trucks or trailers to be used for transporting potable water should be selected with two considerations in mind: the nature of the truck=s normal use and the degree of difficulty in cleaning. Commercial milk or potable water tank trucks are preferred. Trucks designed for the transport of wine, vegetable oil, beer, or other food products may also be used. Trucks that have been used to haul petroleum products or other toxic substances are not acceptable.

Cleaning Procedures

Water trucks: Flush tanks thoroughly with potable water and inspect for particulate matter such as rust and sediment.

Milk trucks: Scrub tanks with detergent, flush thoroughly with potable water, and inspect for cleanliness.

The following cleaning procedures may be employed for tank trucks normally used for hauling such liquids as apple juice, vinegar, wine, yeast, liquid sugar, beer, corn syrup, cottonseed oil, peanut oil, margarine oil, linseed oil, safflower oil, and soybean oil:

1. Open the drain and flush with hot, potable water.
2. Steam with an emulsifying detergent until the tank is clean. If steam is not available, circulate the detergent at a temperature of 180 degrees to 210 degrees Fahrenheit, changing the location of the nozzle to keep the interior continuously wet from top to bottom. Repeat this procedure until the tank is clean.
3. Rinse the tank thoroughly with hot, potable water and drain.

All hoses should be stored off the ground and should be properly capped in storage and transit to prevent contamination. All equipment should be of an approved type for water supply purposes and should be new or obtained from a water supply application. All hoses, pumps and other equipment should be flushed and disinfected before use.

Disinfection Procedures

Disinfection can be accomplished by filling the clean tank with potable water containing at least 50 ppm chlorine and allowing the water to stand for a minimum of 24 hours. The table below indicates the amount of hypochlorite solution (Purex, Clorox, or other household bleach) required to produce 50 ppm in various quantities of water. To insure proper mixing, the bleach must be added slowly as the tank is being filled.

<u>Capacity of Tank, Gallons</u>	<u>Gallons of Bleach Required for 50 ppm*</u>
500	2
1000	1
1500	1 2
2000	2
2500	2 2
3000	3
3500	3 2
4000	4
4500	4 2
5000	5

*Assumes household bleach with five (5) percent available chlorine.

If circumstances preclude the 24-hour waiting period, special instructions for disinfecting the tank with higher chlorine concentrations for shorter periods of time can be obtained from the Department of Natural Resources.

Filling Procedure

The source of water must be an approved public water supply. Tanks should be filled and emptied through an air gap to prevent backflow and contamination of the source. Tank inlets or openings should be covered and properly sealed.

Water to be transported via tank truck must carry a free chlorine residual of one (1) ppm at the beginning of each haul. This may be achieved by adding one (1) cup of household bleach to each 1000 gallons of water. The bleach should be added during filling to insure uniform distribution.

Testing

Chlorine residual should be measured frequently to insure that a minimum of 0.2 ppm free chlorine residual is maintained. If time allows, tank water should be analyzed for bacterial contamination prior to use.